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(54) Title: MEMORY ALLOCATION
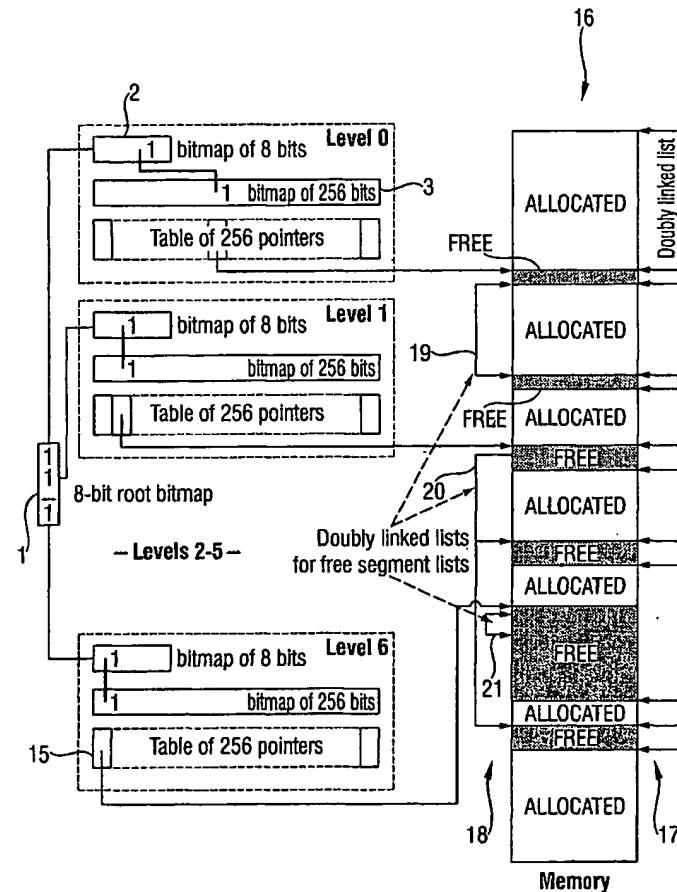
Memory

(57) Abstract: There is provided a method of manag-
ing a data memory in order to improve the processing of
memory allocation requests. Memory segments are as-
sociated with different levels according to their size. A
different granule size to the power of two is defined for
each level. The granule size defines the range of seg-
ment sizes associated with each level. A multiple-stage
bitmap is provided which indicates which of the levels
contains free segments and the size of free segments.
The bitmap is updated each time a memory segment is
freed or allocated. Thereby, a deterministic "Best Fit"
approach is provided which permits the allocation and
release of memory segments at both task and interrupt
level and which reduces memory fragmentation.

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